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The Public Health Journal

OFFICIAL ORGAN

Canadian Public Health Association

Vol. XVI

TORONTO, JUNE, 1925

No. 6

SPECIAL ARTICLES

PRESIDENTIAL ADDRESS—ONTARIO HEALTH OFFICERS' ASSOCIATION

C. N. LAURIE, M.D.

CANCER PROBLEM OF CANADA

FREDERICK L. HOFFMAN, LL.D.

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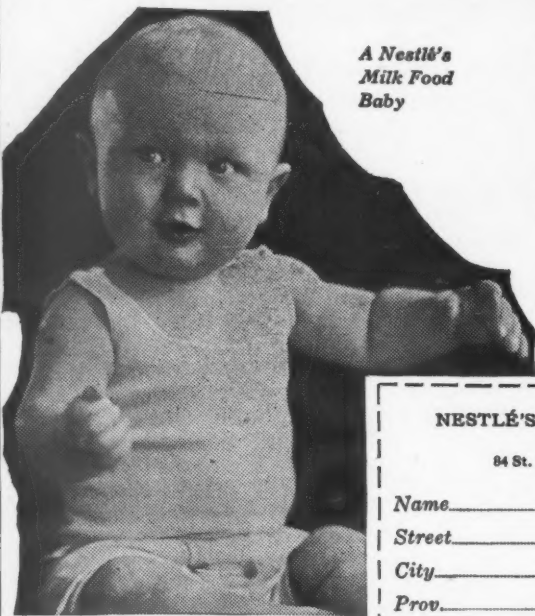
DR. F. J. CONBOY

REPORT OF THE FOURTEENTH ANNUAL CONFERENCE OF THE CANADIAN PUBLIC HEALTH ASSOCIATION

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Presidential Address—Ontario Health Officers' Association

By C. N. LAURIE, M.D.

WE have assembled for the Annual Meeting of Public Health Officers for the Province, and I wish to take this opportunity to thank you for the honour you have conferred on me in electing me to the position of President for this year. It is an honour which any man might well appreciate, as the members of this Association occupy a position of influence and responsibility in our Province which is not exceeded by any other body of citizens.

We are all starting to realize that the health of any community is a matter of the highest importance, and that the Health Officials come into close touch with almost every family in the community. Consequently, we as a body, should strive to live up to the position which we occupy, and I may say that I believe that the majority of us do. While those of us who have attended these meetings in past years have listened to many interesting and instructive papers on different subjects and have benefited thereby, still I think you will agree with me that one of the greatest pleasures is the fact that we once again meet old friends and are able to talk of the days and events of the past which contain happy and pleasant memories. Also we have the opportunity to meet the new men who are each year joining our ranks, to take part in the work for higher and better conditions for the lives of the citizens of this young and promising country, of which we are helping to lay a sure and strong foundation. I am sorry to have to say that there is the other side, and that we miss the faces of some who used to take part with us in these meetings and who contributed greatly to their success.

As I have already said, Public Health Work, to-day, is recognized as one of the most important works connected with any community. It is very different from that of fifteen or twenty years ago, and I speak from

Read before the Ontario Health Officers' Association, Toronto, May 4th, 1925.

experience, as it is thirty-one years since I first held the position of Medical Officer of Health, or as it was then called, Health Officer. For twenty-one years I have held this position in the city in which I live.

At that time our duty seemed to be only to look after quarantines when a case of smallpox, scarlet fever or diphtheria was reported. And it would be hard to say that they were always reported, as the family physician often did not wish to antagonize or inconvenience the family of his patient. As for the rest of the contagious diseases, well, they were left to look after themselves, as far as we were concerned. The salaries we received did not amount to much, but perhaps after all they were as much as we deserved for the work which we did. As for looking after the water, meat, milk, bread, and other food supplies, or the dairies, yards or lanes, well, it was not expected of us.

I have the honour to have held my present position under three different Secretaries of the Provincial Board of Health, and I wish to take this opportunity to pay tribute to the Chief Officer of Health, Dr. J. W. S. McCullough, for the splendid work which he has done since he took charge of the office, which was then attached to the Department of the Provincial Secretary. By hard work, and doubtless many anxious moments, Dr. McCullough has made the Board a power, not only in the Province, but throughout the Dominion. And I believe I am correct in saying that Public Health Work in Ontario is recognized as being among the best in the world.

To-day we are a distinct department of the Government, with a Minister and Deputy Minister, members of our own profession. I want to congratulate the Deputy Minister on his appointment. He is well and favourably known to most of us and we look forward with confidence to Public Health Work being still further advanced, and our Province keeping the high standard it has attained. As I have said, very little was expected of us twenty years ago. Our Sanitary Inspectors were generally appointed as a reward for long service in municipal affairs and as a sort of a pension. I do not say that many of them did not do good work, but the fact remains that they were not expected to do much. To-day our Officers and Inspectors are appointed from among our young and most energetic men, who have made a special study in the work, and the results are apparent and satisfactory. Public Health Work in a community, if efficiently administered, is an investment, not an expense. The improvement of the whole physical life through better and more sanitary surroundings increases the productive power to a degree which can hardly be estimated and reduces the expenditure on charity, hospitals, houses of refuge, jails, etc. The work of Boards of Health has changed from the cure to the prevention of contagious diseases. We now speak of our work

as Preventive Medicine, and it is still true that prevention is much better than cure. To-day we have our District Officers of Health as well as our local Medical Officers, our Provincial Inspectors as well as our local Inspectors, who have charge of the sanitary and health conditions in the great industries of our country, such as lumber camps, mines, railroad camps, mills, summer resorts, etc. There are District Nurses to visit all the homes scattered throughout the country, to instruct and advise the mothers in the care of their children and of themselves. At first these nurses were looked upon with suspicion, especially by the foreign population. To-day they are received with pleasure and are often called by the mothers to get their advice in regard to some ailment from which the family may be suffering. Then there is the school nurse, who has not only to examine the children in the schools, which I consider the least of her duties, as children suffering from serious diseases are not sent to school, but rather to follow the absent children to their homes to find why they are absent. In this manner we are often able to detect cases of contagious disease which might not otherwise be reported, and thus prevent the spread of disease through the schools.

We have the dental clinic, in some municipalities, which I am sorry to say is not as general as it should be, and as shall yet be. We cannot place too great a value on this clinic, as we have learned how very serious it may be to neglect the teeth and allow them to become decayed and ulcerated. It is very important to have them cared for from the earliest ages to prevent the start of disease.

There are the Provincial Laboratories throughout the Province which are of the greatest assistance to the profession and to the public generally, in the examination of milk, water, food supplies, swabs, etc. They have been of untold value in helping improve the health conditions and in protecting the people against disease. In the past all this work was done in Toronto, which was unsatisfactory, especially to places hundreds of miles away, such as Thunder Bay, Kenora, and Rainy River Districts. We also now have the venereal clinics which are doing work of untold value, not only to the present but to future generations, and helping to brighten and improve the lives of numbers who have perhaps been more unfortunate than criminal.

The tuberculosis clinic is proving very popular. It was at first looked upon with suspicion, even by the profession. Last year when I asked the medical men of my city to make use of the clinic for the benefit of their patients, I could only find five patients. When the clinic came and the doctors found out just what it is intended to do, we were able to get seventeen for examination and advice, with an earnest wish on the part of

the doctors and the patients to have the clinic visit us again in the near future.

Then there was the better baby clinic, which did good work and aroused a lot of interest, and will be taken advantage of when it again visits us. These clinics start people thinking and talking about them and thus lead to good results, as after all, the great thing is to educate the people and they will then look for and demand better health and sanitary conditions, and our work will be made much easier. I might speak of the many other duties which come under the control of our officials, but as you know them I shall not take up your time, but rather point out some defects which I think still exist. First, I would suggest that quarantine should be made stricter and more uniform in all municipalities. No municipality lives unto itself, but is closely connected with, and affects, and is affected, by every other municipality. Thus, if quarantine is carelessly carried out, it is a menace to the whole district.

I notice in Dr. Horace L. Britton's report on the Toronto Department of Health, that complete quarantine is established for diphtheria, scarlet fever and measles, and partial quarantine for mumps, chickenpox, whooping cough and erysipelas. In the latter group children are not allowed to go to school or mix with other children or adults. Adult members of the family are allowed to go to work if they are well isolated. I may say that this is the procedure I have followed, but I know that it is not followed in every municipality. That children who have had mumps and measles are allowed to leave their homes and even attend school while the house is under quarantine. This causes confusion and trouble, as naturally when people see children leaving houses which are quarantined, they object to their children being kept in, and we know that disease is often carried in this manner. I think, as far as children are concerned, the quarantine should be strict, and I believe the public will generally support the M.O.H. in so doing. Another weakness is the number of places throughout our Province which have no Medical Officer nor, in fact, any medical men within many miles of them. In the north country there are places with quite a number of people with no medical men within a distance of a hundred miles. I know two divisional points with a large number of people living there without a doctor near them. Then there are section houses every six miles along the railroad and other large settlements without any medical help. These people are likely to contract disease, as there is a constant movement of people along the railroads, and unless the disease reaches such large numbers as to attract attention, they may escape quarantine and carry the disease to other places. It might be said that there are the District Officer of Health and the District Nurse who might attend to these cases, but as the

distances in our country are so great, it is impossible to keep any supervision. In our District it is five hundred and seventy-six miles from the eastern to the western boundary, and about two hundred miles from north to south.

I think the Government should provide attention at least at every divisional point. I am also strongly of the opinion that the day is coming when all medical attention will be rendered free, under the control of the Government. It is in the interest of the public that this should be done, and this would mean a vast improvement in the health of the country.

We have a number of interesting papers to come before this meeting, as well as the report of the committee on the County Medical Officer of Health. I trust that all may take part in the discussions, as I am sure each member has some ideas on the work of Medical Officers on which he would like to have the opinions of the other members of our Association.

Cancer Problem of Canada

By FREDERICK L. HOFFMAN, LL.D.
Prudential Insurance Company

THE menace of cancer is a world phenomenon, affecting more or less alike, all civilized countries. Old countries have somewhat higher rates than new countries, partly, of course, as the result of a higher proportion of aged population. The older countries also are more thoroughly urbanized, with the resulting evils of congestion and highly complex modes of living, but the differences in the cancer death rates of old and new countries are by no means as pronounced as might at first be assumed. The large cities of the new countries present, in many respects, practically identical conditions as the highly urbanized centres of Continental Europe and certain areas of Asia.

Cancer as a problem of prevention and control demands, therefore, at the outset, a thorough grasp of its local incidence on the basis of information derived from a painstaking study and critical analysis of the available vital statistics. Useful cancer investigation must be carried on in strict conformity to the fundamental law of statistics, that is, the law of large numbers. Errors arising out of imperfect methods of diagnosis and disease classification, tend fairly to balance themselves over a period of years. Arguments against the intrinsic trustworthiness of cancer death certificates have little more validity than corresponding arguments against the public utility of the statistics of other important causes of death. Methods of vital statistics, their registration, classification and analysis, have made such substantial progress in the United States and Canada during recent years that the resulting statistical data may be considered as strictly comparable with the corresponding statistics of foreign countries. As a matter of fact, there are convincing reasons for believing that the standard death certificate which is in general use throughout the United States and Canada, yields results decidedly superior to the corresponding data collected for other foreign countries.

For the present purpose, therefore, it is assumed that the cancer statistics of the United States and Canada are thoroughly trustworthy for general purposes, and that the lessons to be drawn therefrom are strictly applicable to the problem of prevention and control.

Cancer prevention, in a strictly technical sense, is at the present time practically impossible, with the exception of certain occupational types of

Read before the Ontario Health Officers' Association, Toronto, May 4th, 1925.

the disease in which the causative factor is thoroughly understood. Thus, for example, occupational cancers directly attributable to X-ray exposure are, of course, readily preventable by the employment of necessary safeguards. Other occupational cancers, such as cotton spinners', aniline dye workers', artificial briquet workers', etc., are also within the preventable group. Any theory of disease prevention must necessarily rest upon a sound conception of causation.

As a result of my extended investigations, I am absolutely convinced that there is not a single causative factor, but rather a group of causative conditions, responsible for malignant growths in different parts of the human body. Until this principle of multiple causation is thoroughly realized it is not likely that the required progress in cancer control will become a reality.

Granting that cancer is always, in its origin, a local affection produced by some irritant condition, it is obviously of the very first importance to determine as many of the predisposing conditions as lie within the reach of modern scientific research. What the nature of the irritating process may be, and its relation to the development of cancerous tissue is, for practical purposes, of quite secondary importance to a better knowledge of the factors that produce the irritation, and which, if removed, will practically eliminate the possibility of cancerous growths.

For the present purpose sarcomas and carcinomas are considered together. The problem of sarcoma is, however, unquestionably quite a different one from that of the more common carcinomatous growths in different parts of the body. Our knowledge regarding sarcomas is far from what it should be, but practically of the total mortality from malignant growths only about 5% are due to this particular type.

The cancer mortality of Canada is ascertainable by two somewhat different methods. First, there are the Provincial reports, which extend in some cases over a period of years, and of which those for Ontario are perhaps the most useful. Then there are the reports of the Federal Department of Statistics, which represent the Canadian Registration Area, including all of the Dominion of Canada, with the exception of the Province of Quebec, which has not as yet adopted the standard certificate of death. Aside from this there are more or less extended returns of the principal Canadian cities, and it is to these that I shall direct particular attention on the present occasion. They are most useful when consolidated into a group of more or less homogeneous urban communities which harmonize the conclusions more strictly in conformity to the law of large numbers.

For the present purpose my observations will deal with 16 Canadian cities, which in 1921 had a combined census population of 2,200,000.

The returns for these cities are limited to the last fifteen years, which would seem sufficient for the present purpose to emphasize clearly the menace of the cancer situation to the Canadian public.

By way of introduction, however, I will first consider the cancer death-rate of the Province of Ontario, limited to the period 1914-1923, as given in a recently published report of the Provincial Board of Health. The cancer death-rate of Ontario in 1914 was 69.6 per 100,000, which increased during the next year to 71.6, during the year following to 72.6, and during 1917 to 79.3. It slightly declined to 75.5 during 1918, but increased by 1919 to 76.9, in 1920 to 85.0, and in 1921 to 88.0. It again declined slightly in 1922 to 87.5, but increased again to 90.0 during 1923. During the decade the increase in the crude Ontario death-rate was from 69.6 to 99.0 per 100,000 of population, equivalent to an actual increase of 20.4 per 100,000. Twenty years earlier, or in 1904, the rate had only been 54.8, which, however, by 1913 had increased to 69.3. The increase of cancer deaths in this decade was, therefore, at the rate of 14.5 per 100,000, against an increase of 20.4 during the last decade. Taking the average for the first decade the rate was 60.1, while during the second decade it was 80.0, equivalent to a net increase of 31%.

I might recall on this occasion that in my first address on the "Menace of Cancer" I established the annual increase in the cancer death-rate of the United States at about $2\frac{1}{2}\%$, which corresponds quite closely to the 3.1 annual increase shown by the Province of Ontario. The number of deaths in the population dealt with is sufficiently large to justify the assumption that the conclusions advanced are on the whole approximately accurate, sufficiently so for both medical and public health purposes. It is, however, only of limited scientific value to deal with the cancer problem in its entirety. It is of the first importance that the rate should be broken up into its component parts to emphasize the different organs and parts of the body affected by the malignant growth, but especially the true incidence of different types of the disease. This, fortunately, is possible for the Province of Ontario, which has published some extremely interesting statistics, well deserving of extended consideration.

I will deal first with cancer of the buccal cavity, which in 1914 prevailed at the rate of 4.1 per 100,000, against 4.4 in 1923. The frequency rate for this group of affections has, therefore, been practically stationary, having been as low as 2.06 in 1913, and reaching a maximum of 4.4 in 1923. The increase indicated cannot, however, be looked upon as significant.

Cancer of the stomach prevailed at a rate of 22.8 in 1914, fluctuating more or less during the intervening years until the rate reached a maximum

of 31.0 in 1923. This increase is quite a measurable addition to the mortality and must, therefore, be considered as particularly suggestive.

The mortality from cancer of the peritoneum, rectum, etc., increased from a rate of 9.8 in 1914 to 14.1 in 1923. The minimum rate for this affection prevailed in 1916, when it was as low as 9.2, while a maximum rate of 14.7 was reached in 1922. This increase must be considered as decidedly significant and suggestive, when taken in connection with the corresponding increase in cancer of the stomach, which includes cancer of the liver.

Cancers of the female generative organs increased from a rate of 5.2 in 1914 to 9.4 in 1923. A minimum rate of 4.7 prevailed in 1915, but this increased rapidly to 6.3 in 1919, and as stated before, to 9.4 in 1923. This type of cancer is, therefore, shown to be increasing at a decidedly rapid rate.

Similar conclusions apply to cancer of the breast. The rate has increased from 4.5 in 1914 to 9.2 in 1923. This increase must be looked upon as a decidedly sinister indication of the greater liability of the women of Ontario to breast tumors when proper comparison is made to corresponding conditions of only a decade ago.

Cancer of the skin has also increased from a rate of 0.99 in 1914 to 2.7 in 1923. Fortunately, skin cancers are relatively of the least importance in the group of cancer affections.

Among the general population of the Province of Ontario, unspecified and ill-defined forms of cancer have remained practically stationary. In 1914 the rate for this group was 20.5, while for 1923 the rate was 19.2. A maximum rate of 28.3 prevailed during 1916. I have always thought that this rate should be further broken up into its component parts, to reveal its true importance, both from a medical and surgical point of view. Unfortunately, the International Classification of deaths does not provide for a further sub-division so that the facts in the case can only be brought to light by detailed examination of the death certificates, which is, invariably, a laborious and difficult process.

Summarizing the foregoing observations for all important forms of cancer, there is shown to have taken place a decided increase during the period under observation. It lies outside the realm of reasonable proportion that this particular increase, as indicated by statistics, should not be in approximate formity to the actual facts of the situation. The increase conforms in a general way to the data elsewhere dealt with for both the United States and Canada.

Statistics of 16 Canadian cities have been combined for the present purpose and will be dealt with briefly. Collectively considered, these statistics also indicate a decided trend towards a higher cancer death-rate,

strongly indicative of the urgency of practical methods aiming at the control of the disease. The term "control" is adopted to avoid confusion with conceptions of prevention and cure, which rest upon fundamentally different considerations. Cancer control implies deliberate methods aiming at the reduction of the cancer death-rates on the basis of more effective medical and public education in cancer facts. No efforts at cancer control are deserving of really serious consideration if they are not followed up by a fair measure of success in reducing the cancer death-rate.

For the whole of Canada it was conclusively established that the number of cancer deaths per annum is about 6,000. Official figures for 1924 are not yet available and as a substitute, therefore, I have collected through the courteous co-operation of the Health Officers of Canadian cities, the required data, beginning with ten cities in 1910 and reaching sixteen cities by 1923, and diminishing to 14 cities in 1924. This consolidated return, which is given in detail following, is perhaps the best measure of the cancer trend in Canada, available at the present time, and sufficiently trustworthy for practical purposes.

CANCER IN CANADIAN CITIES—1910-1924

Year	No. of Cities	Population	Deaths from Cancer	Death-rate per 100,000
1910	10	1,406,838	917	65.2
1911	10	1,518,218	889	58.6
1912	10	1,623,991	1065	65.6
1913	12	1,772,012	1170	66.0
1914	12	1,832,119	1270	69.3
1915	12	1,822,780	1324	72.6
1916	12	1,808,118	1398	77.3
1917	13	1,857,854	1549	83.4
1918	14	2,005,048	1564	78.0
1919	15	2,087,911	1717	82.2
1920	16	2,186,733	1949	89.1
1921	16	2,214,311	1970	89.0
1922	16	2,255,706	2144	95.0
1923	16	2,288,690	2168	94.7
1924	14	2,136,390	2095	98.1
		<hr/> 28,816,719	<hr/> 23,189	<hr/> 80.5

According to the table, the cancer death-rate has increased from a minimum of 58.6 in 1911 to a maximum of 98.1 in 1924. For all practical

purposes this rate corresponds to the combined cancer death-rate of the United States.

In 1924 the cancer death-rate for 68 American cities with a population of 27,000,000 was 111.8, which is particularly accounted for by the exceptionally large mortality of certain large cities, of which I may mention, by way of illustration, the following: Boston, in 1924, had a cancer rate of 151.6; Los Angeles, 154.6, San Diego, Calif., 208.3, Spokane, Wash., 159.5, Concord, N.H., 160.0.

Before discussing the Canadian statistics in detail I add three additional tables as follows.

First, I give the cancer statistics of 12 Canadian cities for the period 1910-14, according to which the combined cancer death-rate for the 12 cities was 66.6.

CANCER IN CANADIAN CITIES—1910-1914

	Estimated Population	Deaths from Cancer	Death-rate per 100,000
Brantford	118,550	68	57.4
Calgary	175,000 (1913-14)	58	33.1
Halifax	234,929	237	100.9
Hamilton	446,677	294	65.8
Montreal	2,406,054	1,609	66.9
Ottawa	473,991	332	70.0
Quebec	429,760	249	57.9
Regina	62,536 (1913-15)	31	49.6
St. John	222,005	197	88.7
Toronto	2,043,000	1,535	75.1
Vancouver	526,440	299	56.8
Winnipeg	839,216	402	47.9
	<hr/> 7,978,158	<hr/> 5,311	<hr/> 66.6

Second, I give a table for 15 Canadian cities for the period 1915-1919, according to which the cancer death-rate was 59.2.

CANCER IN CANADIAN CITIES—1915-1919

	Estimated Population	Deaths from Cancer	Death-rate per 100,000
Brantford	134,799	101	74.9
Calgary	346,302	171	49.4
Edmonton	120,000 (1918-19)	88	73.3

	Estimated Population	Deaths from Cancer	Death-rate per 100,000
Halifax	260,785	272	104.3
Hamilton	513,064	406	79.1
Montreal	2,726,300	2,030	74.5
Ottawa	514,012	473	92.0
Quebec	526,785	351	66.6
Regina	163,725	122	74.5
St. John	249,100	217	87.1
Toronto	2,389,000	2,076	86.9
Vancouver	511,827	512	100.0
Victoria	37,120 (1919)	62	167.0
Windsor	89,000	50	56.2
Winnipeg	951,892	621	65.2
	<hr/> 9,533,711	<hr/> 7,552	<hr/> 79.2

Third, I give a table for 16 Canadian cities for the period 1920-1924, according to which the average cancer death-rate was 93.2,

CANCER IN CANADIAN CITIES—1920-1924

	Estimated Population	Deaths from Cancer	Death-rate per 100,000
Brantford	153,948	117	76.0
Calgary	348,305	183	52.5
Edmonton	300,627	350	116.4
Halifax	233,488 (1920-23)	289	123.8
Hamilton	596,426	513	86.0
Montreal	3,153,426	2,515	79.8
Ottawa	457,182 (1920-23)	404	88.4
Quebec	623,810	401	64.3
Regina	174,271	145	83.2
St. John	243,106	304	125.0
Saskatoon	135,366	117	86.4
Toronto	2,646,000	2,860	108.1
Vancouver	621,958	818	131.5
Victoria	192,220	306	159.2
Windsor	218,900	156	71.3
Winnipeg	982,797	848	86.3
	<hr/> 11,081,830	<hr/> 10,326	<hr/> 93.2

A startling contrast is presented by these three tables, the first of which gives only one city with a rate of 100.9 (Halifax). The second gives three cities with a rate in excess of 100 per 100,000, or respectively, Halifax, Vancouver and Victoria. The third table shows six cities with a rate in excess of 100 per 100,000, or respectively, Halifax, Hamilton, St. John, Toronto, Vancouver and Victoria.

The excessive rates for Vancouver and Victoria for the last five years having been 131.5 and 59.2 respectively, correspond to the cancer death-rate of some of the American Pacific Coast cities, as follows:

For 1924 the rate for Los Angeles was 154.6, for Oakland 114.7, for Denver 121.4, for San Diego, Calif. 208.3, for San Francisco 106.4, Seattle 102.8, Spokane, Wash. 159.5.

Aside from the excessive rates for certain cities of Canada, the relatively low rate for Montreal, given as 79.8, for Ottawa 88.4, Quebec 64.3, are significant. There are the strongest reasons for believing that the French Canadian population are less liable to cancer than the population of British origin. I cannot, on this occasion, enlarge upon the racial aspects of the cancer problem, but in this particular direction is cancer research most urgently needed, as is the race pathology of the disease, the precise ascertainment of which is unquestionably measurably advanced because of cancer control.

One phase, however, may be referred to, that the Indian population of the United States and Canada, as far as my investigations enable me to judge, is unquestionably less liable to cancer than the white population. In fact the disease is so rare that among certain tribes not in contact with civilization it may be said not to exist. My conclusions are based upon extended investigations and personal interviews in North, Central and South America, and extensive correspondence with reservation physicians, recently brought down to the end of 1924. The results of this investigation may be summarized in this statement, that while cancer occurs among our Indian tribes, cancer of the breast, particularly in our Indian women, is very rarely met with. This statement cannot be contradicted by the claim that our Indian population is not under proper medical supervision. We have a considerable medical staff at work among our Indians, who represent, on the whole, an element thoroughly qualified to ascertain and diagnose cancerous affections.

The correspondence which I have carried on for a number of years fully confirms this statement that cancerous affections, particularly among Indians not in close contact with civilization, are very seldom met with. It would mean an extremely valuable contribution to the scientific study of the cancer problem if the habits, particularly as regards diet, of our Indian population were thoroughly inquired into and made a matter of

record. I hope in the near future to deal with this question in some detail on the basis of some seventy reports made by physicians connected with our Indian Agencies, or the medical service of the Indian tribes of the United States. Unfortunately, I have not thus far been able to extend my investigations to the Indians of Canada, but there are no reasons for believing that the results will suffer material modification, in my view.

I will not further enlarge upon the statistical aspects of the Canadian cancer problem, hoping however, to amplify my present remarks when published by some extended tables which will make facts for individual cities readily accessible.

In 1921 in an address before the meeting of the American Medical Association in San Francisco, I had occasion to bring to public attention the excessive incidence of cancer on the Pacific Coast, and as a result of the public interest felt, I initiated the San Francisco Cancer Survey, which has since been extended to include a number of other cities, including Boston, Buffalo, Albany, Chicago, New Orleans and Portsmouth, England. One report has been published upon the results of that investigation and a more extended report is in the course of publication.

In that investigation I am considering some 20,000 original death certificates with a due regard to all the facts certified to by the medical attendant. Among the facts which are seldom taken cognizance of by the health officers are the known duration of the disease, previous duration of residence, the possible hospital treatment of the disease, the possible autopsy disposition of the body and the diagnostic methods resting upon certification of the causes of death.

In the San Francisco investigation, the average previous known duration of the disease, for illustration, was about 18 months, varying, however, for different organs and parts, and it may be stated, differentiating also for the average known duration of the disease in other localities.

I would lay particular stress upon the time factor as of supreme importance in the education of the medical profession and the laity for control purposes. It is a safe assumption that at the present time three fourths of the cancer cases reach the hospital or surgeon practically in an unoperable condition.

In a recent work on cancer, Dr. Childe of Portsmouth, England, places particular emphasis upon the time element, following in this respect, Dr. Bloodgood of Baltimore, who also presented a strong argument on this point at a cancer meeting in New Orleans last Fall. What we are in need of more than anything else is a definite understanding of facts on the part of the public, other than mere mortality data which do not reach to the root of the situation. What we need more than anything

else is information derived from living cancer patients, and in this connection I may say that my present investigation includes the use of a questionnaire, which has thus far brought me not far from 1,000 returns.

It would very measurably advance the results of my own effort if the use of this questionnaire could be extended to a number of important hospitals or clinics of the Dominion of Canada. My investigation in San Francisco concerning living cancer patients clearly proves that there has been on an average a loss in weight of about 30 pounds between the outset and the termination of the disease. General indications are that most of the patients while in good health were above the average weight in proportion to their height. Many of them frankly admit themselves to be heavy eaters, particularly heavy meat eaters and heavy sugar eaters, while only a small proportion of the patients were heavy fat eaters. In about one half the cases there is an admission of a chronic condition of intestinal stasis and of the habitual use of purgatives or laxatives. In about one-third of the cases the patients suffer, or have suffered, from rheumatism or a chronic rheumatic condition. The evidence regarding heredity was practically negative. A few cases were reported and these will be made a subject of further investigation.

Finally, it may be pointed out that the argument frequently met with that most, or many of the cancer patients of large cities are non-residents, is clearly disproven by the San Francisco investigation. The average duration of residence had been 22 years in San Francisco, and 33 years in California. I regret that for the time being I cannot further enlarge upon the results of this investigation which are as yet far from final.

Literature on cancer has assumed such prodigious proportions that no one can hope to master more than a substantial fraction of the more important contributions. All over the world men are at work compiling knowledge in cancer research which thus far, however, has not produced results usefully applicable to the cause of cancer control.

In its last analysis the problem lies in the hands of the general practitioner. He is first consulted by the cancer patient, and then only too often after countless delay, which is frequently fatal.

The sum and substance of the problem may be summed up in the statement that the principal cause of cancer mortality is delay on the part of the patient to seek qualified treatment. Dr. Childe has pointed out that in certainly one-third of the cancer cases in the male, and one-half of cancer cases in females, the disease occurs in readily accessible organs and parts that might be cured if treated early. Nothing is more lamentable than the overwhelming evidence that most of the cancer cases of the present time have been permitted to drift along before coming under medical observation.

In the light of our present understanding of the cancer problem no other conclusion can be justified than that only radical surgical treatment, amplified by radium, X-ray, etc., offers the only genuine hope whatsoever of successful cure.

The saddest phase of the cancer situation is the increased activities of those who prey upon the public distributing patent medicines, or offering cures which have no substantial basis of facts to support themselves. It is the paramount duty of the State and of the medical profession to suppress the cancer "quack" who was never more active than at the present time.

The appalling mortality from cancer admits that a cure for the disease, in the technical sense of the term, has not been discovered, but it would be unfair to the medical and surgical profession if attention were not drawn, to an increasing extent, to successful forms of control, but for which the cancer death toll would reach, even ordinarily, more alarming proportions. Any one familiar with hospital or private medical and surgical experience but knows full well that thousands and tens of thousands of persons who have been operated on for cancer are alive to-day. It is regrettable that the collective experience in this respect should not have long since been brought together and an unanswerable argument of the dictum that in the earliest qualified treatment lies the only hope of cure.

A Clean Milk Supply for Small Towns

By DR. A. L. MCKAY

Provincial Department of Health of Ontario

WHEN our Secretary, Dr. Middleton, asked that a paper be prepared by one of our Division of Preventable Diseases along the line of Communicable Disease control, it occurred to us that it would be best to deal with the subject along general lines as to the prevention of the spread of infection. Most communicable diseases are spread by direct contact with the infected individual, and can be controlled by quarantine and isolation, and adoption of specific remedies when provided.

The two remaining routes of transmission are food and water. I have chosen for this paper the subject of a clean milk supply, because milk is the cheapest, one of the best and most dangerous of all our foods. For years a great publicity campaign has been in progress urging people to drink more milk, and to use other fresh dairy products. To children of the pre-school age this especially applies, and it behooves us, therefore, as health officers, to assist in every possible way the production of clean, safe milk, in each and every municipality.

First, we might review the legislation as it now stands in relation to milk control; not that I believe legislation is the keynote of the solution of the milk problem, as I shall explain later, but it must always serve as a basis on which to apply a sound educational programme. The Ontario Milk Act has been in force since July, 1911. This Act is a more or less enabling legislation, allowing the council of each municipality to pass a Milk By-law for the control of all milk sold for human consumption within its borders. It lays down certain basic requirements as to the composition of the milk, as to butter fat and total solids content, the prohibition of addition of preservatives or water to milk, and also prohibits the removal of butter fat from the milk, before it is sold. These regulations are more concerned with the economic side of the question and the prevention of fraud than with the prevention of the spread of diseases. However, the Act also provides (1) for the appointment of an inspector with enumeration of his duties and powers, (2) the prohibition of the sale of milk from cows with diseased udders or anthrax, (3) that no person suffering from communicable disease, or under quarantine for

Read before the Ontario Health Officers' Association, Toronto, May 4th, 1925.

communicable disease, shall assist in the handling or sale of milk. It also outlined the conditions for the sale of milk as Certified Milk and Pasteurized Milk. The regulations as set forth by the Municipal Council must be submitted for approval to the Minister of Agriculture in writing. The Provincial Department of Health has prepared a Model Milk By-Law which may be used by the Councils to guide them in formulating a By-Law applicable to their local conditions. It cannot be too strongly emphasized that the legislation as it now stands is simply an enabling legislation and each municipality must pass its own by-law to ensure for itself a clean safe milk supply. As it so often happens, milk that is refused for dirt by a municipality that has a by-law may be sold in municipalities without a by-law.

When these facts are laid before the citizens, and I think that this is one of the many duties of the M.O.H., there should not be much difficulty in working up a campaign for clean milk in your municipality. If one town has a properly enforced milk by-law and refuse milk from certain dairies, as soon as the neighbouring town knows this and realizes that milk that is too dirty for their neighbours is being sold to them, it should not be difficult to work up interest in the passage of a milk by-law in such a case. However, I think that any campaign for clean milk will fail unless local interest is aroused, the situation clearly and simply laid before the ratepayers, and a general demand throughout the municipality for the passage of such a by-law is created. The M.O.H. and his B. of H., who have the public health at heart should, I believe, be in a great measure the instigators of this movement.

When it is considered that public opinion is sufficiently aroused for a clean milk supply then should a by-law, prepared by the Local Board of Health, be presented to the Council for enactment, and then forwarded to the Minister of Agriculture for approval. (Copies of the Model Milk By-Law may be obtained any time from the Department.) A by-law similar to, and following the salient features of the Model By-Law, should work well in any municipality. However, I consider the appointment of a properly qualified inspector to be *the* most important point to be stressed. A man should be appointed who is tactful and efficient, that is, he should be primarily engaged in helping the dairyman in his problems and showing him what should be done, and why. Of course such a man is not always available, and I believe it is here that the Provincial Department of Health should exercise more control and help in the appointment of a man who has some training in dairying. Facilities should be provided for their training and instruction by the local Medical Officer of Health, or failing this, by the Department of Health.

Most dirt and infection reaches the milk before it leaves the stable—

the inspector should know how to prevent this dirt getting in and should instruct the dairyman in his methods and handling to prevent it. He should be equipped with a sedimentation test outfit, a thermometer and a lactometer, the first two being the most used, and most useful. It is not his duty to insist on the dairyman buying expensive equipment, or to go to unnecessary alterations in his barns, but it is his duty to show him how to keep the dirt and bacteria from his milk and how to prevent the rapid multiplication of these bacteria, which do gain entrance, by a rapid and efficient cooling. His four main duties at the farm are:—

- (1) To insist on clean and proper milking.
- (2) To insist on the use of sterilized utensils and also to instruct how to sterilize.
- (3) To insist on rapid cooling in ice water if possible.
- (4) To insist on clean stables.

With these four points in mind and with the co-operation of the dairyman the milk as it leaves the dairy-farm should be *clean*.

So far we have considered only the production of reasonably clean milk, for clean milk is a very important factor in milk control, but before the milk is sold to the consumer something else must be done to render it *safe* for human consumption. Even with our best system of inspection, education and control, we still have a very variable element, *e.g.*, the human factor, and also the factor of undetected disease in the animal. The best method of control is *pasteurization*.

Let us consider a few benefits of pasteurization:—

(1) Proper pasteurization will prevent milk-borne epidemics of typhoid fever, diphtheria, scarlet fever, septic sore throat and human tuberculosis by killing the organisms in the process.

(2) Proper pasteurization will reduce the incidents of the diarrhoeal diseases of infancy. One of our ablest Health Officers in Ontario expressed his opinion to me a few weeks ago, namely, that the reduction of the infant mortality in his municipality last year to the lowest death-rate in the Dominion was in the greatest measure due to the properly controlled milk supply and pasteurization, which had been inaugurated some years previously.

(3) Proper pasteurization will kill the bacteria of bovine tuberculosis. Let me here quote a few figures as to the incidence of bovine tuberculosis in children in the years before pasteurization, and since pasteurization. Between the ages of one to four years it has been definitely shown that in the larger cities, with 90% more of their milk supply pasteurized, they have reduced their infant mortality rate of non-pulmonary tuberculosis 34% in 5 years. An excess of 25 deaths per 100,000 indicates approxi-

mate danger from bovine tuberculosis at this age period. This may seem a small danger, but figures are always cold, and the fact that one or more infant's lives are needlessly sacrificed in a small municipality is sufficient argument that the milk should be rendered safe, as far as the spread of bovine tuberculosis infection is concerned. The Federal Department of Agriculture has a scheme whereby a municipality may ask that all cows supplying raw milk should be tuberculin tested, and all other milk from untested cows should be pasteurized. This has been carried out in only seven cities and towns in Ontario. But this policy, to cover the whole Province, would require a much larger staff of trained veterinarians than the Federal Government has to offer, and also an enormous economic loss in the destruction of diseased cattle. The scheme is now being done away with for any other municipality applying, and a new scheme of testing by geographical areas inaugurated. However, as each municipality can render its milk safe now from bovine tuberculosis infection by pasteurization this seems to be the method of choice.

(4) Proper pasteurization will prolong the life of the milk by reducing the bacterial count.

(5) Proper pasteurization will reduce the bacterial count by 80-90%. I have purposely left mentioning bacterial count until the last, because some workers have claimed that the bringing of bacterial counts into milk control is confusing and unnecessary. I do not think so.

An unscrupulous dairyman may successfully filter out his grass dirt which would show on sedimentation test before sending to the vendor, but in so doing he will actually increase the bacterial content. Bacterial count is by far the most reliable check that we have on the production of clean milk. A dairyman with persistent high counts should be investigated as to his methods and general cleanliness, and if found necessary, his supply should be excluded. Milk may be submitted to any of our nine branch laboratories for analysis if it is not found feasible for this work to be done by the municipality.

(6) Proper pasteurization will tend to the lowering of infant mortality in any municipality. Undoubtedly the great increase in child welfare work is the major factor in this decrease, but any such campaign for improved infant hygiene will fail without the basis of a pure, safe milk supply.

Now let us consider some of the so-called arguments against pasteurization.

(1) Expense.—Some will say that the added cost of pasteurized milk will tend to decrease the amount consumed. The added cost to a quart of pasteurized milk to that of raw milk is estimated to be less than one cent

per quart. As milk is one of our best and cheapest foods even at this price the added cost should not affect the amount consumed.

(2) *Alteration of milk.*

The vitamins in milk, which are, Fat Soluble A, Water Soluble B, and Wat. Soluble C, are not all affected in milk by pasteurization. Vitamin C, the anti-scorbutic element, is possibly destroyed, the others are not. In the diet of artificially fed infants this is readily made up by the addition of orange juice. As far as experiments show, the other two vitamins, A and B, are not destroyed. Of course, in the diet of adults and children of school age this factor is not an element, because the vitamins are regularly supplied in any normal diet in sufficient amount. The ferments of milk, or the "Life" of the milk, are not destroyed at the temperature of pasteurization.

(3) *Alteration of taste.*

Some people have complained that the milk loses its pure taste after pasteurization. If by the pure farm taste they mean the cowy odour, which can only be caused by cow manure and stable dirt, as found in dirty raw milk, then I say let them drink such milk themselves, but let them not stand in the way of people who want clean safe milk for themselves and their children.

(4) *Carelessness on the part of dairyman.*

Some have claimed that pasteurization tends to make the dairyman careless and dirty, as he feels he is thus protected. This should not be so. Clean cows, clean milkers, clean utensils and clean surroundings are, however, absolutely essential, and these conditions may be obtained by an efficient and constructive form of inspection.

The next and last point I wish to bring out is the cost of equipping and maintaining a pasteurization plant for a town, of say 2,500 inhabitants. It can be done. Over 20 towns of a population near this number in Ontario have over 80% of their milk pasteurized, and most of them 100%. The cost to equip such a plant is estimated to be \$1500-\$1800. I believe the municipality should bear the cost of the self-recording thermometer; and should retain the key for inspection, to see that pasteurization is properly carried out. Of course, local conditions vary, but there is usually to be found in each municipality at least one larger vendor who would see the opportunity of practically a monopoly if a pasteurization by-law is passed, and who is willing to go to this expense of equipping a plant. A careful conscientious man to operate this plant is essential, and also an inspector who knows what pasteurization means and can assist him in his problems. I also firmly believe that the term "Pasteurized Milk" should not be allowed to be applied to any milk unless it has been properly pasteurized and chilled under supervision. Nothing will hurt

pasteurization more than to have an epidemic traced to milk improperly labelled "Pasteurized", as the result of negligence on the part of a careless vendor. Milk which is not heated to the proper temperature may not only act as a more fertile culture medium, and I cannot too strongly stress the point that if a pasteurization by-law is passed it should be under the closest supervision, and frequent bacterial counts should be made to test out its efficiency.

The Provincial Department has gone on record in favour of pasteurization, and I believe should maintain some control over the efficiency with which pasteurization is carried out in municipalities which have passed this by-law.

In conclusion let me recapitulate a few points:—

(1) Local Board of Health and Health Officer should instigate campaign for clean milk.

(2) Legislation as it now stands is purely enabling legislation.

(3) Importance of local interest being aroused before attempting passage of by-law.

(4) Careful choice of milk inspector, who must be a teacher, tactful and well informed, and even he must be instructed himself if necessary.

(5) That pasteurization renders the milk safe and obviates the human factor.

(6) That when a pasteurization by-law is passed the importance of seeing to it that pasteurization is efficiently carried out.

Dentistry as a Public Health Activity

By DR. F. J. CONBOY

THE fact that dentistry has an important place in a public health programme is now recognized by every student of preventive medicine, but while this relationship is in this day of research and investigation being strongly emphasized, it has in reality existed since primitive and prehistoric times. The origin of what may be termed the dental art is practically coeval with that of medicine. In its early days, Dentistry as practised by the primitive medicine man, was probably purely curative in character, and was devoted to the alleviation of pain by remedial methods, or by charms and incantations. It is quite possible that the history of the healing art dates back to the creation of man. Necessity, instinct and chance must have taught man some curative practices, just as it taught him to prepare his food and to provide for the other wants of life. They may have thus found out that pain from diseased teeth could at times be relieved by the application of heat or cold, or the packing of the cavity with henbane or some other sedative preparation.

These activities were not entirely confined to personal and individual effort, because we find that the members of the sacerdotal caste practised medicine and had instruments which they used for the extraction of teeth, and the votive tables which hung upon the walls of the ancient temples contained information in connection with dental diseases. Even in the early days, the health of the people was a matter of public concern, as Herodotus tells us that the Babylonians used to carry their sick into the public squares where the passerby might enquire regarding the malady from which the patient suffered, and if he had heard of a similar case he could suggest the means used to accomplish a cure. So we find that from the days of antiquity up to the present dentistry has had a part in the health programme, both from the standpoint of the individual and family, and from the relationship to community welfare.

I will not take time to follow the evolution of dentistry as a public health activity, it had its days of prominence and its periods of retardation. Pierre Fauchard, in his great book upon dental diseases, devotes considerable space to the amplification of the fact that dental disorders cause systemic lesions, but it remained for Sir Wm. Hunter, of England, two

Read before the Ontario Health Officers' Association, Toronto, May 4th, 1925.

hundred years later, to bring to the attention of the dentists the alarming information that much of the work which was being done was causing more harm than good, and that dental infection was a real menace to health.

This important announcement made by Hunter lead to much research and investigation, and it is now conceded by all modern health authorities that dental conditions do, to a very large extent, determine the health of the people, and that no public health organization can function efficiently without paying attention to this outstanding factor.

In the Journal of the American Medical Association, Sept. 15, 1924, there is a report from their London Correspondent under the subtitle, "The Dental Condition of The Population", calling attention to a report from a Government Committee, as follows: "It is now known, on the authority of a Government Committee's report, that one-third of all the diseases in the country were due directly or indirectly to dental disease".

Dental diseases cause systemic disorders in a variety of ways, and I would like to refresh your memories by mentioning a few.

The most outstanding is focal infection, the bacteria and toxins from abscess areas at root ends, and pyorrhea pockets entering the circulation and being carried to some other part of the body, where a secondary lesion is started. There appears to be no escape from the conclusion that many of the degenerative diseases which appear to be on the increase, have as one of their important, and in many cases their chief causative factor, dental infection. It is probably seldom the case that this is the only contributing factor, but when you take into consideration the fact that the great majority of adult individuals are carrying seriously infected teeth, potentially capable of producing degenerative diseases if the local and systemic quarantine breaks down, you must come to the conclusion that this condition is one that merits serious consideration.

It has been well established that the strains of organisms which are found in the great majority of heart, kidney, joint and muscle and nerve lesions, can also be recognized in the dental foci. We are, therefore, justified in coming to the conclusion that careful and proper dental treatment will do much to improve the general health.

The second consideration is the presence of large quantities of bacteria in the neglected mouth. It is a veritable breeding place for disease germs, and these must have a most detrimental effect upon the physical welfare. We are, and should be, very careful in regard to sanitation, filthy conditions must be cleaned up, food must be protected, and all dishes properly washed, but after all these precautions we allow the food to pass through a mouth so filthy that a proper appreciation of the condition would cause repulsion. The bacteria toxins and debris are carried down with the

food, and must at times cause serious inflammatory conditions of the lining of the alimentary canal. Decayed teeth may also harbor the germs which cause the contagious diseases, and it has been conclusively proven that the neglected mouth is a rampant source of infection. Indeed this must be so, or sterilization is a delusion, and sanitation a waste of time and effort.

It is quite unnecessary for me to urge the importance of proper mastication. From the standpoint of digestion, as well as preventive dentistry, thorough chewing of the food is essential. The adequate mastication of coarse fibrous foods provides natural cleansing for the teeth and the stimulation which will keep the gums in a healthy condition. The exercise of the parts causes a healthy blood supply, which provides for tissue repair and development. When children, because of sore teeth, are unable to properly chew their food, they develop the habit of bolting, which remains with them throughout adult life, often causing indigestion, mal-nutrition, and lessened resistance to disease.

The unerupted or impacted tooth presents a problem which demands attention. Locked in its boney enclosure, ever trying to come into proper position, and obstructed by another tooth, it exerts a pressure which causes serious nervous disorders. Many indefinitely located pains are caused by these teeth, and even patients suffering from mental diseases have shown wonderful improvement after their removal.

I do not need to stress the danger of allowing sharp edges of teeth or old roots to irritate the tissues of the mouth, we all know that many tumors, including those that are malignant, have been caused by such irritation. Dr. Bloodgood, of Johns Hopkins University, made this statement, "Cancer of the mouth will be a thing of the past when the public understands and acts on thorough mouth hygiene".

The acute abscess and the neuralgia from an exposed pulp need no emphasis, the pain and distress is so marked that the sufferer demands immediate attention. Unfortunately the general public are not aware of the fact that it is the chronic abscess, which causes no discomfort, that is most dangerous. A tooth may be serviceable and free from pain, and yet have an area of infection at the root end which is a distinct menace to health, and the size of the area of rarefaction is not the important consideration. A small area in one patient will do far more harm than a large one in a patient with better resistance. Some people can carry a large amount of focal infection, they have a strong resistance, and they are taking care of themselves in other ways, but that is no guarantee that another person can safely take the same chances, or that the same individual can continue to withstand the infection indefinitely. Some overload in the form of a mild illness, overwork or worry, may present and

the enemy will then have an opportunity to make a successful attack. The only safety lies in the removal of dental infection.

I think I have presented enough evidence to substantiate the claim that dental diseases may cause systemic disorders, that dentistry has an important place in preventive medicine, and consequently should be included in any modern public health programme.

Let me now quote the opinions of a few outstanding physicians and public health authorities.

Dr. Truby Kink, Health Officer, England:

"Decay of the teeth is the most urgent and gravest of all diseases of our time, a more serious national scourge than cancer or consumption, and it is the main precursor and cause of infection and disease in general."

Sir Wm. Osler:

"There is not one single thing in preventive medicine that equals mouth hygiene and the preservation of the teeth."

Dr. Chas. Mayo:

"The next great step in medical progress in preventive medicine should be made by dentists."

Dr. E. C. Rosenow:

"It seems to me that a public health propaganda should be inaugurated to inform people of the dangers to their health which may arise from infected teeth and how these dangers may be avoided."

It would be entirely useless to prove that dental diseases cause systemic disorders without setting forth some procedure that will adequately provide protection against these conditions; and so I desire to present a public dental health programme which we feel will prove efficient. Such a programme must include the following activities:

- (1) *Regular Inspection and Proper Treatment.*—The teeth must be examined regularly once every six months and the proper treatment given. Thus the cavities will be discovered and filled while small; this prevents pulp involvement, which leads to many long and expensive root canal treatments, and secures a better and more permanent result with the minimum of pain, loss of tooth tissue and expense. A tooth properly treated when decay is in its incipient stages, retains a live healthy pulp and will not develop a root-end abscess.

The early indications of pyorrhea will be noted and the causes of this dreaded disease, which occasions the loss of so many teeth, will be removed. Pernicious habits which lead to dental irregularity and

facial deformity will be detected and corrected, and treatment for irregularity will be begun early in life when the best results can be achieved.

- (2) The second activity is to educate the general public so that the people will realize the importance of a properly balanced diet. Diet is, of course, largely an individual matter, but we are convinced that a smaller consumption of carbo-hydrate food, usually taken in the form of confectionery and candy, and a larger amount of fruit and vegetables, especially raw vegetables, would be very helpful from a dental standpoint.
- (3) The third consideration is the proper and sufficient mastication of food. Very few people know how to chew their food. They are expert in many things which they might well do without, but they are woefully crude in this great health essential. Thorough mastication not only aids digestion, but the chewing of coarse fibrous food acts as a natural tooth cleanser and gives the parts that exercise which will ensure a healthy blood supply.
- (4) The last requisite is artificial cleansing or mouth toilet. It is most important that the people form good health habits and there is no practice more helpful than regular tooth brushing, which cleans the teeth, thus preventing decay, and guards against pyorrhea by removing irritants and stimulating the gum tissue.

How is this programme to be carried to the people?

- I First, by school Dental services maintained by the Municipalities.

It is entirely unnecessary for me to point out to you the advantages of a school dental service in so far as it influences the physical well being of the children, but there may be some who have not given much thought to the relationship of such a service to the mental and moral development of the boys and girls.

Dental diseases are a frequent cause of mental retardation, and the school board that does not provide for the physical welfare of the children is not getting good value for the money spent on education.

All knowledge is gained through the senses: through the five main windows of sight, hearing, touch, taste and smell, the child looks out upon the surrounding world and gathers in the sensations, images and concepts which are developed into mental material. What a great catastrophe if these sense organs are diseased or defective, and in consequence the knowledge gained through them is not correct. All psychologists and psychiatrists agree that thought is dependent upon the body: when the brain is poisoned or diseased, the nerves weak or the internal glands functioning poorly, intellectual development is interfered

with. All these conditions may be caused to a greater or less extent by toxins which enter the blood stream from abscess areas and pyorrhea pockets. Then again, if a child is to make educational progress he must concentrate upon his work. How can a child centre his attention upon study if suffering pain or weakened by dental disease? I will not take time to deal with the loss of opportunity caused by absence from school, or of the extra burden thus placed on the teacher, but will content myself by quoting the opinion of some of our prominent educators on this subject.

From J. A. Taylor, B.A., Public School Inspector, City of St. Thomas, and District No. 2, Elgin: "It is found that the great majority of children who suffer from physical disability are from one to five years behind other children of their age in their studies."

Dr. Luther H. Gulick, of New York, is responsible for the statement that of 400,000 children examined, those with two or more bad teeth averaged five months behind the grade they should occupy, and observations made in connection with the Toronto schools bear out this contention.

A test made in Cleveland demonstrated a 60% increase in efficiency after proper dental treatment.

Wallis, of London, England, who was one of the original investigators of the conditions of childrens' mouths: "Those with the most highly septic mouths were frequently two standards below what they ought to be in accordance with their age."

The old saying that, if a pupil is to make the best use of his educational advantages he must have a sound mind in a sound body, is just as true to-day as it ever was, it is a psychological impossibility to reach the maximum of intellectual efficiency unless the mind has a sound body through which to function. True, there are examples in history of great minds operating in weak bodies, but it is also true that these minds would have been still better had they had strong bodies through which to work.

An efficient dental service means better moral health. The physical, mental and moral, are intimately and closely related. That which injures one, to a certain extent weakens the other. Endurance, ability and reliability go hand in hand. A pupil physically weak is handicapped in his intellectual development, and a pupil mentally weak is handicapped in his character-building.

The first requisite for character development is right thinking; the pupil who continuously suffers pain and is handicapped by physical defects has thoughts that are morose, gloomy and sullen, and these have a destructive influence upon his character.

It is the child who, through some physical or mental defect, finds it impossible to hold his own in the classroom, that becomes the truant.

He soon begins to realize that he is a failure and feels that the school authorities are oppressing and persecuting him, that everybody's hand is against him, and the moral disease of unreliability soon manifests itself, because the person weakened by disease is weak in will power and more readily yields to temptation.

Judge Lindsay, the great authority on Juvenile delinquency, insists that every boy who appears in his court have his teeth properly treated, so that he will be free from pain and infection and be able to properly masticate his food. He realizes that the removal of a physical defect is often the first step in character-building.

A modern school dental service should provide for the children of pre-school age. Every child should be placed under the care of the dentist when two years of age. The deciduous, or first teeth, must be preserved; they serve the child during the period of greatest development, and when lost or diseased the child's growth is hindered. Many children's ailments are caused by infection from diseased roots and inflamed gums, and conditions thus developed often continue throughout adult life.

For the purpose of bringing to the attention of the proper authorities and the general public the value of a school dental service we are organizing a province-wide dental survey. The dentists are giving their time gratuitously for the initial dental examination, and the department is supplying the necessary material, so that the inspection can be conducted entirely without cost to the municipality.

Such a survey has many advantages, notification cards showing the condition of the children's mouths are sent to the parents, and a large proportion provide the necessary treatment. Local statistics are tabulated and thus give the authorities an accurate idea of the extent of the problem and the cost of its solution. The examination creates a general interest in health matters, and causes the people to more seriously consider their responsibility to the children and their duty to themselves. This survey may be obtained by any municipality in the Province.

The second method by which we hope to carry the advantages of dental treatment to the people is through the Hospital Dental Department. There are thousands of people who need dental attention but cannot afford to have the work done. Dentistry is not a luxury, it is an absolute necessity, yet as at present organized, it is impossible for many people to pay the necessary fees. Something must be done, and the hospital department provides one solution. Wherever the hospital authorities are willing to provide the equipment and supplies the members of the profession will give their time gratuitously to man the clinic. The Western Hospital, Toronto, is now operating a three-chair dental clinic in a most

successful manner, and it is confidently expected that many others in the larger centres will take advantage of this efficient form of service.

The third activity is the industrial or factory clinic. This form of dental service is very popular in some parts of the United States, and should prove most successful here. During the last one hundred years of our industrial history we have been busy perfecting the inanimate machine, during the next one hundred years our time will be occupied in perfecting the human machine. Every factory employee loses on an average eight days each year through sickness, and many times that number of days through inefficiency caused by defects and infection. We all know how factories are organized for effective work. The machines are kept in perfect order, oiled, cleaned and every part adjusted. How very important it is then that the man who runs the machine should also be efficient. Moreover, it appears to be rather foolish to spend much time and money on a school service to remove defects and teach the children good health habits, and then to entirely neglect them when they go out into adult life.

The fourth consideration has to do with the problem of a dental service in all parts of the Province. There are some districts where the people are able to pay for dental treatment, but they are far removed from a resident dentist and they hesitate to spend their time and money travelling to and from the nearest large centre. For many such communities the itinerant dentist and the travelling clinic is the only solution, and a number of these services are now being organized.

In conclusion, I would like to point out the absolute need for more aggressive health education. Tradition and custom prevent professional men from measuring up to their full responsibility in this regard. Many conscientious dentists feel that they are doing their full duty when they give advice and treatment to those who seek it, and that professional ethics will not permit them to go farther. What is Ethics? Is it not in the final analyses the exemplification of the Golden Rule, doing unto others as you would that they should do unto you? Would these men be satisfied if their neighbour had some information which would protect them from great injury and loss, and he withheld it simply because he was not absolutely sure that his advice would be welcomed? Dentists have knowledge which the people need, consequently they are in duty bound to impart that knowledge, and the highest ethics will not permit them to take any other course. But how should this useful information be disseminated? The most efficient agent is the public press. There has, unfortunately, in recent years been a misunderstanding between some professions and some newspapers, due to a confusion of thought between health education and advertising. Newspaper men have made the state-

ment that the doctors and dentists, in their public health education, were seeking cheap advertising, and the professional men in turn charged the newspapers with encouraging advertising which was not in accordance with ethical practice. This situation is regrettable and should be corrected. There is all the difference in the world between health education and advertising. One is altruistic and benevolent, the other is usually self-seeking and mercenary. One has as its activating motive the betterment of humanity, the other the securing of personal gain. The healing professions and the newspapers both owe it to the general public to join hands and, by mutual co-operation, bring to the people that knowledge which will protect them from preventable diseases and perchance premature death. With this object in view, the dental department has prepared several hundred short readable newspaper articles, which will be sent to any newspaper that will provide the necessary space. Motion pictures, slides, posters and pamphlets are also available, and members of the profession in all parts of the Province are willing to give public addresses, pointing out the means whereby an individual may protect himself from the ravages of dental disease.

My final word is one of gratitude, I am indeed delighted to have this opportunity to speak to the health officers of Ontario. We are all engaged in a great altruistic endeavour to protect the citizens of this Province from disease and injury. Health is most important, both from the standpoint of the individual and the state, and the task of preserving health and preventing disease is so gigantic that it challenges our best efforts and calls for many personal sacrifices; but the results will more than justify the time and energy expended. Our activities differ to some extent, but we are all engaged in a work which will never become monotonous, for new avenues of helpful service will ever open up before us and we can look back upon a past resplendent with the glory of useful work well done.

The New Regulations Governing Medical Inspection of Schools

By DR. J. T. PHAIR

Chief School Medical Officer of Ontario

IN 1909 legislation was enacted in this Province, which made possible the establishment of school medical and dental inspection by local Boards of Education and School Boards, and while this legislation was permissive in character, practically all of the larger and many of the smaller urban centres, during the five years following its enactment, took advantage of the opportunity thus presented to initiate some form of school health service. That the name "School Medical Inspection," under which the work was established and originally carried on, was largely a misnomer, will be born out by a statement made later on as to the number of municipalities in which a physician was associated with the work.

Prompted by the necessity of maintaining some degree of uniformity and stability to a movement that was practically new, and which was received by some of those most intimately affected as of doubtful value, the Provincial Department of Education drafted regulations governing the conduct of such service.

These regulations at first made provision only for the work as it applied to cities, towns, and other self-contained areas, but were later amended to take care of the rural needs by permitting school boards, serving an area too small to make the plan outlined financially possible, to unite with others similarly placed, and to establish a combination of rural school sections under a School Medical Inspection Committee, appointed by the sections themselves, which would initiate the type of programme best suited to the needs of the district to be served.

Provision was made for two types of service, one in which a school nurse worked alone, and another in which a medical officer was appointed, with whom was associated one or more school nurses. The necessary qualifications of both of these officers were duly set forth. In only 10 of the 65-70 municipalities in which school health supervision has been established has a local physician been associated with the work.

In 1919 the Department of Education Act was amended to permit of the establishment of a central organization, to be known as the Division of School Medical Inspection, under that Department, the duties of the officers appointed under such legislation being to encourage the universal

adoption of some type of service, and to elevate the standard of the work already established. In 1921 Government grants were first awarded to those municipalities, urban or rural, carrying on a type of work which met the standard set by the Department.

In 1917 special legislation was granted at the request of the City of Toronto exempting all cities with a population of 200,000 or over from the provisions of the original measure, and permitting the transfer of the control of the School Medical, Dental and Nursing Service from the local educational authorities to the local health department.

In 1924 a bill was introduced by the present Prime Minister by which the staff of the above-mentioned Division of School Medical Inspection, and the responsibility for the conduct of this service, were transferred from the Provincial Department of Education to the Provincial Department of Health. Local municipalities were also permitted to make such arrangements as were deemed necessary to make such a transfer possible, when it was mutually desired. Following the adoption of such legislation, it was necessary that the regulations governing the service should conform to the altered conditions, and it is with these amended regulations that I wish to deal briefly this morning.

I would first draw your attention to the fact that while there was a measure of co-operation between the Department of Education and the Department of Health in these regulations, they are primarily regulations formulated and issued by the first mentioned Department. They permit of the continuance of the type of work previously carried on and maintained by local boards of education and school boards in the centres in which it had been in operation prior to July 31st, 1924. The absorption by the local health authorities of this exceedingly important health activity is also provided for, only, however, with the consent of the local school board. They also specifically state that all school health activities established on and after August 1st, 1924, shall be under the control of the local board of health.

No appreciable change is made in the type of service permitted, but an effort has been made to emphasize the importance of including a physician in any worth-while school health programme by having the local medical officer of health automatically become school medical officer in all centres initiating the new plan of operation. The qualifications necessary for all those carrying on this work have also been definitely outlined. In all centres in which the new programme is adopted the cost of the service shall be borne by the local board of health. Sub-section 3, Section 5, has, however, been amended to permit of school boards or organizations interested in the welfare of the community making contributions towards the cost of the work. Provision has also

been made for the supplying of free treatment under certain conditions by others of the staff employed.

While the control of the service is in the hands of the local boards of health in centres adopting the new scheme, the rights of the school authorities are effectively safeguarded, and the members of the school health staff must be acceptable to the Minister of Education; also they must be subject to the authority of the local school inspector or principal as regards any interference with the regular school programme.

The duties of the physician, dentist and nurse are clearly outlined, and due emphasis is placed on the difference between an examination by a physician and an inspection by a nurse. The necessity of supplanting the superficial inspection of children formerly permitted, by a worth-while examination with clothing removed, is also stressed. Accurate record-keeping is also demanded, and the role of the school medical officer and nurse in the field of treatment is likewise clearly stated.

The duties of the school teacher or principal, particularly as they apply to the attempted control of both major and minor communicable diseases, is more clearly defined than heretofore, and I wish here to quote briefly from Section 10, Sub-section *a* and *b*, page 9.

Grants will be awarded by the Department of Education as previously, namely, an annual grant of \$10.00 per classroom will be paid to each town, village or rural school board uniting together for the purpose of carrying on this service and otherwise meeting the requirements of the Department; an annual grant of \$5.00 per classroom will be paid to each town, village or self-contained area employing a full-time school nurse; and an annual grant of \$3.00 per classroom is paid to every city of less than 200,000 population, where a system of school medical inspection approved by the Minister is carried on. Grants are also made by the Department of Health to municipalities inaugurating and carrying on the type of school health service suggested by that Department. These are as follows:

Every local Board of Health which inaugurates and carries on Medical and Dental Inspection of Schools, and employs at least one Public Health Nurse in such work, shall be entitled to receive an annual grant from the Department of Health of \$500.00 towards the salary of such Nurse.

In every municipality with a population of less than 200,000, an additional annual grant of \$100.00 shall be paid towards the salary of each additional Public Health Nurse so employed.

In every municipality with a population of 200,000 and upwards an additional grant of \$25.00 shall be paid towards the salary of each additional Public Health Nurse so employed.

Report of the Fourteenth Annual Conference of the Canadian Public Health Association

ALL of those who were fortunate enough to be present at the Montreal meeting of the Canadian Public Health Association must have been impressed by the enthusiasm that was exhibited by those in attendance. The question of the future of the Association was largely dealt with from the standpoint of possible expansion rather than that of retraction, and each and every meeting was not only well attended, but there was an evidence of real interest that seemed to run over from one session to the next.

At this session at which the causes of Infant Mortality were so well and clearly presented, there were some 250 present, and the discussion was only limited by the time at the disposal of the chairmen. At the afternoon session of Monday, under the chairmanship of Dr. McCullough, due in part to the intense heat, the attendance fell slightly, but on Tuesday, at both morning and afternoon sessions, particularly at the session in the afternoon, the attendance again reached the mark set on Monday morning. The meeting held on Tuesday evening, devoted to the Section of the Laboratory Workers, in spite of the technical nature of some of the papers presented, drew a better attendance than was even hoped for, and was truly representative in its character, some ten organizations and four provinces being represented.

No comment on the meeting, no matter how brief, could be complete without special reference to the hospitality exhibited by the Province of Quebec and the City of Montreal: the noonday luncheon on Monday, and the dinner the same evening, left nothing to be desired in the way of entertainment.

At the business session on Tuesday, the following resolutions were presented and carried.

(1) That the C.P.H.A. function as an organization, which will offer to pass upon the scientific accuracy of any health literature submitted to it; and that a special committee be appointed for this purpose, of which Dr. R. D. Defries be appointed chairman.

(2) That this annual meeting go on record as approving the formation of a section of Public Health Nursing. That Miss Emory be appointed convenor pro-tem.

(3) *Periodical Medical Examination.*

Whereas the degenerate diseases of middle life are increasingly evident, and

Whereas medical science has demonstrated that most of the causes of ill health in adults are preventable, or at least curable in their early stages,

Be it resolved that the Canadian Public Health Association go on record as favouring the complete medical examination yearly by the family physician, of every member of the family, the birthday of each member being suggested as the most suitable day.

Further, be it resolved that the Canadian Public Health Association request the Canadian Medical Association to prepare model forms for such examination.

Resolution Re Causes of Mortality Among Illegitimate Children.

(4) 1st. A Law forcing mothers to nurse their baby for at least six months. (As in Baltimore.)

2nd. Apply in all its rigor the Law existing in the Civil Laws of the Province of Quebec, forcing the father to share in the expenses for the mother and her child.

3rd. Reorganization of the medical control in the Institutions.

(a) Classification of children by age or months in the wards.

(b) Smaller number of children by wards.

(c) Observation wards for incoming babies

(d) Isolation wards for sick babies.

4th. Uplifting of moral and social standing of unmarried mothers.

(a) By forming societies, like Women's Directory.

(b) Place mothers in services where they could take charge of their baby at the same time.

5th. Wet Nurses.

6th. Grant from Provincial Government.

(a) Administration left to University of McGill and University of Montreal.

7th. Revise the scale of monthly indemnity, presently given by public authorities for each child.

8th. Premium should be given as an encouragement for nursing mothers.

(5) RESOLVED that the Canadian Public Health Association forward its best thanks to the Provincial Government of Quebec for the munificent series of entertainments given to the Association during its meeting in Montreal. It greatly appreciates the fact that these entertainments illustrate the abiding faith of the Provincial authorities in the progress of public health.

(6) RESOLVED that the Canadian Public Health Association extend hearty thanks to the Mayor and Council of the City of Montreal for the cordial reception and entertainment tendered to the members of this

Association. They likewise genuinely appreciate the support to public health which they have given through their offices; for to them, in no small measure, has the success of the meeting been due.

(7) RESOLVED that this Association deem it advisable, in the interest of greater efficiency in public health work in Canada, that in appointments of Medical Officers of Health, consideration be given to their holding a Degree or Diploma in Public Health from some recognized University or College.

(8) RESOLVED that this Association earnestly endorses pasteurization of all public milk supplies, and urges that particular care be exercised by all health authorities that pasteurization be properly and efficiently carried out, as well as all the essential precautions relating to milk prior to pasteurization, such as the proper cooling of milk to 45 degrees F.

(9) That the Committee on Policy and Progress be discharged. That the President, Secretary and Treasurer of the Association be appointed as a Committee on Policy, with power to add to their numbers. That this annual meeting instruct them to draw up alternate proposals for the future of the Association. That these proposals be circularized to all members on or before April 1st, 1926, and that they be voted upon at the next annual meeting.

(10) The following Resolution was included in the transactions of the Section of Laboratory Workers; namely, that this meeting go on record as being desirous of expressing their deep regret at the loss that the Association had sustained in the death last year of Dr. R. H. Mullin, of Vancouver, and that the Secretary of the Association convey to Mrs. Mullin the sympathy of the members of the Section.

(11) *Report of Committee Appointed to Recommend One Single Method for Doing Vaccination Against Smallpox.*

Your Committee begs to recommend the following procedure:

(a) Vaccine Virus.

The virus should be kept continuously cold and used prior to the expiration of the date stamped on the container.

(b) Site of Vaccination.

The best place to vaccinate is the area of the left arm over the point of insertion of the deltoid muscle.

(c) Preparation of Site.

Wash the skin with soap and water, or alcohol or ether.

(d) Technique of Vaccination.

A drop of a vaccine is placed on the cleansed surface of the arm. A needle held almost parallel (15 degrees) to the skin is gently pushed through the drop of vaccine into the top layer of the skin for about one-eighth of an inch. No blood is drawn, as the true skin is not pierced.

(e) Results of a successful Vaccination.

Local: At the site of vaccination a pearly vesicle develops. This expands until it reaches about the size of a ten cent piece. It then dries up, leaving the scar about the size of a five cent piece.

General: There is a slight headache and feeling of chillness, showing constitutional effect.

(f) After Care.

No pads, plasters or celluloid shields should be applied at any time after vaccination.

It is suggested that a piece of gauze, cotton or linen be fastened to the inside seam of the shirt, so that it will hang loosely over the site of vaccination.

Sanitary Inspectors' Association

THE SANITARY INSPECTOR AS A PUBLIC HEALTH WORKER

By MR. D. S. MCKEE

Provincial Sanitary Inspector, Sudbury, Ontario

(Read before the Annual Convention at Fort William, Ont.)

IN the Province of Ontario we have a large number of full-time sanitary inspectors and many part-time inspectors. All these men must be termed Public Health workers, especially since they are the direct connecting link in bringing the straight facts, in simple language, to the general public, concerning matters which bear directly on the Health of the public.

By this I would not say that every time the inspector suppresses a nuisance, or makes an investigation on receipt of a complaint, he saves a life or prevents a serious epidemic of a contagious disease. A considerable amount of time and money is spent yearly investigating why a certain disease developed, and more especially in suppressing it as early as possible with a minimum loss of life; but are we spending enough money and time trying to find out why these diseases do not develop, and under what conditions "Prevention is surely cheaper than cure," and worthy of more attention than it receives from the general public?

I would go as far as to say that unknowingly you may all have prevented what might have been a serious epidemic of sickness or disease at some period during your routine work, in dealing with the many problems which come under your notice from day to day. I am sure we can all look back to some time in our lives and say, "well, I may have prevented sickness in this community or perhaps a death," if so, this alone, is ample remuneration for your efforts and service put forth in Public Health work.

A few of the many problems which bear either directly or indirectly on Public Health, which the inspector has under his supervision when making a survey of his municipality, or in carrying out routine work, might be noted here, such as:

- (1) Disposal of sewage and night soil.
- (2) Pollution of wells and other water supplies.
- (3) Pollution of streams and public waters.
- (4) Garbage Disposal.
- (5) Nuisances.

- (6) Housing.
- (7) Ventilation and heating.
- (8) Light.
- (9) Handling of food supplies by public vendors.
- (10) Pasteurization and the handling of milk supplies.
- (11) Last and most important, enforcing the Health Laws, which is very often left entirely to the inspectors' good judgment.

I would like to say a few words concerning that familiar word "Nuisances" and its relation to Public Health. There is still a broad field of work for the lay inspector, in the suppression of nuisances which bear directly on health, and more especially in our rural districts, which are not always provided with modern conveniences, such as sewerage and water facilities, and where often very little supervision is rendered by the local Boards of Health. In some cases a Board is not in existence, or is not functioning, owing to local political or business reasons. In such cases the inspector can render valuable Public Health service to a community by endeavouring to educate the public in the importance of sanitation and matters which affect the health of the people in the community.

In dealing with what is termed "a nuisance," by the public, the inspector is compelled to use common discretion and sound judgment, knowing full well the various types of complaints we receive daily concerning nuisances there is no definition to the word. Blackstone's definition is "that which worketh harm, injury or damage." We may consider anything to be a nuisance if it causes sickness, suffering, depression or annoyance; but again the inspector will be compelled to use good judgment in defining how the nuisance may affect the health of the community, especially since there is no standard of what constitutes suffering, depression or annoyance, therefore, each nuisance will have to be studied carefully as to in what way it may affect health. We are therefore compelled to divide what are termed nuisances into those which affect the human body physically, and those which affect it only through the senses. An open unsanitary privy or garbage heap containing typhoid germs may be the cause of a serious epidemic through fly contact, or other means of transmission to the human body. Then again we have non-contagious sickness, caused through irritating or poisonous gases or fumes from chemical works and factories. A nuisance will also be termed anything which indirectly will produce a physical effect on the human body, either by loss of sleep or appetite.

I regret to say that sometimes the public believe it is the duty of all Health Departments, through their inspectors, or otherwise, to remedy anything disagreeable, even conditions which have no relation to health whatever. I heard of a lady who called up the Health Department to

know what they could do to control green fly on her best roses in the garden. Another complaint was the neighbour's tree that shaded the house, also a complaint of a fellow clerk with an offensive breath. Complaints such as these show distinctly the lack of knowledge on the part of the public as to what constitutes public health work.

This lack of knowledge on the part of the public of the aims and objects of Health Departments opens a broad field of work for the sanitary inspector as a propagandist in educating the public along Public Health work, especially concerning sanitation, industrial and personal hygiene and their effect on the health and welfare of the people, especially the children who are receiving their first education on sanitation in their own back yards and alleyways. Experience has taught us that where the child has been brought up with clean, bright surroundings, both at home and in school, under ordinary circumstances, later on in life will be even more inclined to improve on his parents' ideas of sanitation, and thus become an example to his community. In this way alone the inspector from day to day is taking an important part in Public Health education and the prevention of disease, although there may be very few statistics or facts to show just what diseases or to what extent he may have prevented them. This does not apply alone to dealing with nuisances but is just as important, and probably more so, in all phases of his work. The education, which you are carrying on from door to door, will cause the public and their children to think "why we are compelled to do these things by the Health Departments," and ultimately civic cleanliness and sanitation will be considered as important as personal cleanliness. Before leaving this subject I would like to explain that I do not mean to say that by cleaning up a district you are going to eliminate contagious diseases or sickness for ever, but I would say that you are reducing the favourable breeding places for the various disease germs, and also the breeding place for flies, which so capably give free transportation of these disease germs to our food. We know that the principal source of disease is man himself; dirt and decayed substances are only dangerous when polluted by man or animal, so that to eliminate the possibilities of contagious diseases and other sickness we should strongly advocate the importance of clean sanitary conditions surrounding each home throughout the community, and take every opportunity of explaining its relation to health to each offender. We should endeavour, as inspectors of our different Health Departments, to convince the public that we are working wholly for their interests and the health and welfare of the community they are living in. We are not employed as police constables; but are employed in the different Health Departments throughout the Dominion, to help to enforce Health Laws and educate the public in the best methods of preventing disease.

Before concluding, I would like to say a few words concerning the

work of the Provincial Sanitary Inspectors in Ontario. The Provincial Board of Health employs five Sanitary Inspectors to supervise sanitary conditions and enforce the health laws where no local health organization exists, each inspector having a large territory to cover in the unorganized districts, the centre of which he makes his headquarters. The inspector in the field is responsible to the Chief Officer of Health through the Director of Industrial Hygiene and the Chief Sanitary Inspector, who supervises the field work. In this way close sanitary supervision is given to all industries, summer resorts, and the many small towns and villages throughout the unorganized territory. During the past winter statistics show that we had in the lumbering industry alone something like 152 different companies, operating 590 bush camps, and employing approximately 23,800 men throughout the winter months; and in addition to this we have the saw mill camps, mining camps, small towns and communities, roughly covering 100,000 people in the unorganized territory, where there are no local health laws other than those enforced under these Regulations by the inspector in the field.

During the early fall and winter months most of our time is spent in making routine inspections and approving of the location and construction of these camps and their equipment. An operator on going into the unorganized territory to establish a camp is first required to notify the Provincial Board of Health of the establishment of each and every camp, and its location, etc.; he is also compelled to construct all his camps, conforming to either of the standard plans shown in the Regulations, which are drawn up under the Ontario Health Act, and cover all points concerning healthfulness and comfort in camp life. A copy of these Regulations is left with or sent to the operator who then assumes all responsibility, just as a local Board of Health in a municipality, and what is most important the operator must draw up an agreement with a qualified Physician, a copy of which is sent to the Provincial Board for approval. The Physician then is required to visit his camps at least once monthly, and to report to the Board on the sanitary conditions and health of the employees on each visit; he also provides free medicine and attention to all employees for a nominal fee of from 50c. to \$1.00 per month per man. There is a temporary Isolation Hospital at each camp, and a general hospital for the sick or injured, supplied by the operator. Should a contagious disease develop at a camp, there being a Physician at hand and an Isolation Hospital convenient to the camp, the disease can be checked in a very short time. In this way all employees working in our vast Northern countries, bush camps and other industries are taken care of.

Great credit is due to our Chief Officer of Health, Dr. McCullough, for his foresight in establishing this reform in Northern Ontario industries during the past few years.

Monthly Jottings of The Sanitary Inspectors' Association of Canada

The Annual Convention is to be held this year in Winnipeg, on August 19th, 20th and 21st. The Winnipeg Members will do their utmost to make the delegates feel at home. Your Executive Council would urge every member to make a special effort to be present.

We have just heard from Mr. Glover of Brantford, Ontario. Mr. Glover is hopeful of being at the Convention.

We expect to have a number of Eastern members at the Convention, but what about the West?

"Sorry I did not forward my subscription before now; just plain neglect." This from a letter received by the Secretary a few days ago. If the above remark applies to other members, we hope they will take the hint.

There is nothing more discouraging to a Secretary than to receive no reply to his letters. On the other hand, it puts pep into the Secretary to hear occasionally from individual members.

Once more we have to record the loss of a valued member. Mr. Thos. Watson, of the Provincial Department of Health of Saskatchewan, retired at the end of last month, and has gone to live at the Coast. Mr. Watson has been called the father of the Association, and rightly so, for it was he who organized the first meeting. As reported in a previous issue, Mr. Watson had a serious illness early this year, and his family deemed it wise that he should retire. We are sure that the members will wish for him renewed health, and hope that he will enjoy many years of quiet and rest.

Your Secretary has been in communication with Mr. E. C. Alexander, of Wellington, New Zealand. If we remember aright, Mr. Alexander was at one time in Calgary. He is now Hon. Secretary-Treasurer of the New Zealand Sanitary Inspectors' Association, and reports that they are still making progress. Under separate cover, Mr. Alexander sent a number of copies of their publications. He desires to have his regards conveyed to our Calgary and Edmonton members, as well as other old friends.



The Provincial Board of Health of Ontario

COMMUNICABLE DISEASES REPORTED FOR THE
PROVINCE FOR THE WEEKS ENDING MAY 2nd,
9th, 16th, 23rd, 30th, 1925

COMPARATIVE TABLE

Diseases	1925		1924	
	Cases-Deaths		Cases-Deaths	
Cerebro Spinal Meningitis....	..	3	9	8
Chancroid.....	5	..
Chicken Pox.....	363	..	350	..
Diphtheria.....	192	10	270	26
Encephalitis Lethargica.....	..	2	3	3
Gonorrhoea.....	215	..	75	..
Influenza.....	..	28	..	14
German Measles.....	21	..	171	..
Measles.....	2152	3	4577	13
Mumps.....	478	..	978	..
Poliomyelitis.....	5	2
Pneumonia.....	..	168	..	188
Scarlet Fever.....	507	6	659	8
Septic Sore Throat.....	2	..	5	1
Small Pox.....	16	1	32	2
Syphilis.....	177	..	115	..
Tuberculosis.....	209	92	217	105
Typhoid.....	53	9	56	2
Whooping Cough.....	400	11	141	4
Goitre.....	42	..	2	1

The following municipalities reported cases of Small Pox:

Ottawa 2, Welland 5, Merriton 3, Chatham 3, Crowland 1, St. Catharines 1, Guelph 1, Kenora 1 death, April 22, 1925.

News Notes

HOME NURSING IN ALBERTA.—The women of the province are realizing, in increasing numbers, the splendid work that the Red Cross Society is doing in organizing Home Nursing Classes. The people are now asking for the classes, and the organization work has been greatly simplified. The best proof of this is, that during six months of 1924, thirteen classes were formed, while during the first four months of 1925 twenty-nine classes were formed.

Dr. L. A. Pequegnat, Eastern Organizer of the Canadian Social Hygiene Council, has left for the East, where he will deliver addresses on Social Hygiene before the New Brunswick Medical Society, Nova Scotia Health Officers Association and the Nova Scotia Medical Society.

At the annual meeting of the C.P.H.A. it was decided to hold the next meeting of the Association in the City of Toronto in 1926. The following officers were elected:

Hon. President—The Hon. Dr. Forbes Godfrey, Minister of Health for Ontario.

President—Dr. Geo. Porter, University of Toronto, Toronto.

Ist Vice-President—Dr. D. A. Clark, Asst. Deputy Minister of Health, Ottawa.

2nd Vice-President—Miss F. M. Shaw, Director of School of Graduate Nurses, Montreal.

Treasurer—Dr. H. C. Cruikshank, Toronto.

Secretary—Dr. J. T. Phair, Toronto.

Notes on Current Literature

From the Health Information Service, Canadian Red Cross Society,
410 Sherbourne St., Toronto.

Studies in Health Education

Experimental studies on methods of health education in schools conducted by the Massachusetts Institute of Technology. "American Journal of Public Health," May 1925, page 405.

Health Education

A course of study in health education in the schools of Saginaw, Michigan, with detailed outlines used by teachers in each grade. "Public Health," Michigan, March 1925, page 73.

Preparatory Clinics

By Professor A. Couvelaire. "The World's Health," March 1925, page 89.

The Excesses of Birth Control

An address by Dr. Louis I. Dublin of the Metropolitan Life Insurance Company.

Physical Examination

An address on the importance of periodic physical examination. By Dr. George S. Young, President of the Ontario Medical Association. "The Canadian Nurse," May 1925, page 229.

The "Backwash" of Juvenile Immigration

Extract from "Canada's Child Immigrants," the report of the Committee on Immigration and Colonization to the Social Service Council of Canada, January 1925. "Social Welfare," April 1925, page 138.

The Posture of Children

Technique for interesting children in good posture and the use of silhouettes in training the child. "The Nation's Health," April 1925, page 241.

The Prevention of Cancer

An address by Dr. W. W. Chipman of McGill University. "The Canadian Medical Association Journal," May 1925, page 467.

Diphtheria Protection

Suggestions for the organization of diphtheria protection campaigns. "Public Health," Michigan, March 1925, page 86.

How to Nurse Tuberculosis in the Home

By Noel Bardswell, M.V.O., F.R.C.P. "The Red Cross" (British), April 1925, page 33.

Venereal Diseases

Combating the venereal diseases in the United States of America. By William F. Snow, M.D., General Director, American Social Hygiene Association. "The World's Health," March 1925, page 100.

Medical and Hospital Services in Ontario

Report by the Department of Health of Ontario respecting medical and hospital services in the province. Copies of this report may be obtained from the Department of Health, Spadina House, Spadina Crescent, Toronto.

Psychological Tests in Industry

The use of psychological tests in selecting men for employment. By Dr. Donald Laird, Psychological Laboratory, Colgate University. "The Nation's Health," April 1925, page 235.

AMERICAN RED CROSS PUBLICATIONS

The American Red Cross has recently issued the following publications:

The Nursing Service of the American Red Cross (A.R.C. 710).

Information for Nurses Desiring to Enrol with the American Red Cross (A.R.C. 703).

Life Saving Methods (A.R.C. 1005).

REPORTS OF PROVINCIAL DIVISIONS—CANADIAN RED CROSS SOCIETY

The following Provincial Divisions have recently issued reports on their work during 1924. Copies may be obtained on application to the Divisional Office:

Alberta—800 Traders Building, Calgary, Alta.

Nova Scotia—63 Metropole Building, Halifax, N.S.

Ontario—410 Sherbourne Street, Toronto, Ontario.

Book Review

"Personal Hygiene Applied," by Jesse Feiring Williams, M.D., Professor of Physical Education, Teachers College, Columbia University, New York City. Second edition revised. 12 mo. of 414 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1925. Cloth. \$2.00 net.

This is the second edition of Williams' well-known and authoritative text-book. The instruction concerning scarlet fever, diabetes, goitre, iodine and the vitamins has been revised in accordance with present knowledge in these matters.

The book is well written and should prove useful to both teachers and students of hygiene.

Editorial

A DOMINION HEALTH PROGRAMME

Of all the problems deserving the thoughtful consideration of citizens of this country none are more outstanding or more worthy of attention than those involved in the working out of a co-ordinated Dominion health programme. The desirability of organizing the forces of the country to prevent the inroads of disease, to improve the bodily machine and to lengthen the span of life, should be obvious to everyone. In spite of the fact that up to the present time men and women generally have given little attention to these matters, the machinery to prevent unnecessary disease and death is gradually growing and improving, and the fact that, speaking generally, the expectation of life on this continent has increased from about 47 years in 1900, to approximately 55 in 1920, is evidence that results can be achieved.

But the fact remains that there is still a great deal of preventable disease extant, and that its elimination might easily extend the normal expectation of life far beyond limits which we at present think possible.

We have dealt in some degree with acute infections, and in such fields as infant mortality, typhoid fever, and tuberculosis the work of the health officer has been most effective—not fully effective, but marked in its results. Yet the fields still to be covered are almost limitless. None of the diseases mentioned have been fully controlled. Diseases of children, such as diphtheria and scarlet fever, in spite of the existence of means of prevention, are still responsible for a heavy mortality. The Venereal Diseases take a heavy toll, and are still passed over in polite silence in many health reports, while diseases such as Bright's disease, arteriosclerosis, and cancer, are scarcely within the field of prevention. Added to this, one has the fact that, although we have in the medical profession, potentially a great army of trained experts in the preventive field, the organization of our communities is of such a type that early medical treatment for incipient disease is impossible for thousands, and the preventive function of the profession unrecognized.

Obviously there is need of increasing effort in all fields. The problems of how to get research done, and of how to apply effectively and universally preventive and curative measures of all sorts should be tackled, and an effort should be made to co-ordinate all preventive and curative procedures. The only question really worthy of discussion in this regard is as to how this may be achieved.

The solution of the problem undoubtedly lies in leadership to the end that all existing agencies may be brought together.

We have a Dominion Health Department with a Minister of Health in the Cabinet. We have strong provincial health departments, a fairly well organized medical profession, and various voluntary organizations in the field of health. With the exception of the work undertaken by the Dominion Health Council and the venereal disease control scheme, which involves financial co-operation on the part of the Dominion and the provinces, there is no attempt at organizing and bringing together these forces. The venereal disease control scheme itself is under constant attack in the Dominion House.

'United we stand, divided we fall' should be the motto adopted by health agencies, official and otherwise. Efforts should be made by such agencies to get together and to stay together, if health conservation as an essential matter deserving the earnest and constant consideration of the public is to come into its own. To some extent the achievement of this end will depend upon self-sacrifice and concessions on the part of various parties concerned. But if the problem is attacked in a spirit of patriotism, and if the ideal of a common and worthy aim is maintained, there should be little difficulty in its achievement.

Health conservation is not essentially a matter for the provinces or for the Dominion—for the medical profession or for the voluntary health promoting agencies, or for any particular unit in the state. It is a matter for the united effort of all the people for their own good, and until this general point of view is adopted complete success in the development of an ideal programme will be difficult to achieve.

